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THE NEW GOLD RUSH

by

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ISSUE DEFINITION

The recent recession has seen a strong upswing in exploration for gold. Record numbers of claims were staked in Ontario, Quebec and British Columbia in 1983. Major new discoveries and new ventures in old gold mining camps have stimulated considerable interest among investors and the general public. The junior mining company, often functioning on a shoestring and a dream, has come into its own. Many new mining projects, however, are marginal operations which are extremely vulnerable to any downward trend in the price of gold.

BACKGROUND AND ANALYSIS

A. Gold Prices

1. The Demonetization of Gold

In 1968, the International Monetary Fund established a two-tier price system for gold, by which its monetary value remained at the price of \$U.S.35 a troy ounce(1) established in 1934, and its value for non-monetary transactions would be allowed to respond to market forces. Attempting to eliminate gold as a major reserve asset, the IMF created the Special Drawing Right, equivalent to 1/35 of an ounce of gold.

The widespread adoption of freely floating exchange rates between currencies allowed market forces to work against the U.S. dollar. Gold rose to \$42.22 an ounce by early 1973. By November 1973, the Committee

(1) All gold prices quoted are in U.S. dollars per troy ounce; production figures and ore grades are also given in troy ounces.

on Reform of the International Monetary System proposed an amendment to the Bretton Woods agreement which recommended a reduction in the role of gold in the international monetary system and the disposition of the IMF's own gold reserves. The Special Drawing Right would no longer be based on gold, the official price for gold would be abolished, and the IMF would no longer deal in gold. Several countries, notably South Africa, moved to revalue their gold reserves at market prices.

As of January 1975 private investors in the U.S. were once again permitted to own gold bullion; however, the expected jumps in the price of gold did not materialize immediately but a slow upward crawl over the next year was apparent.

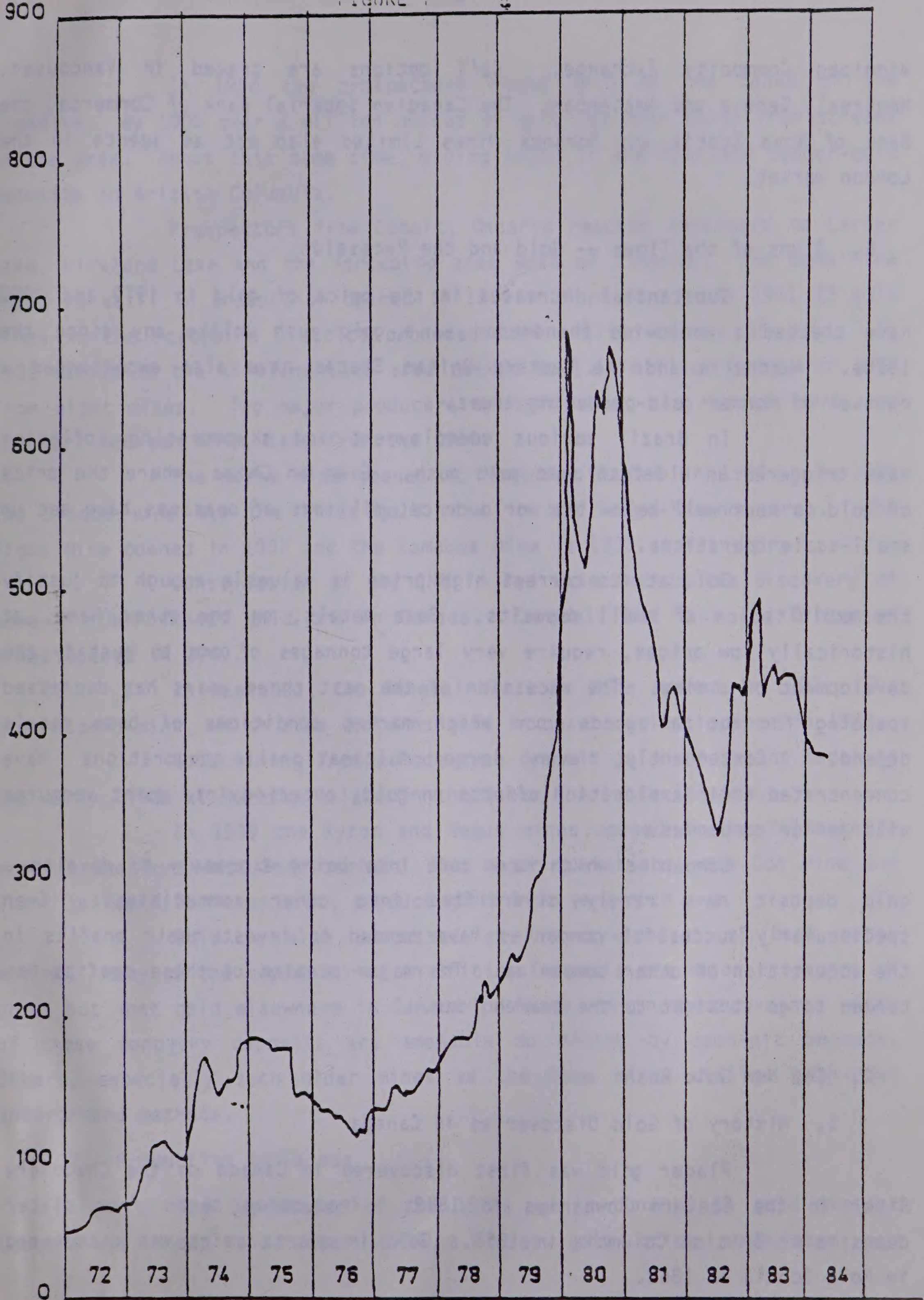
In 1979, the second oil price shock and the Soviet invasion of Afghanistan sent the price of gold soaring. All over North America members of the general public lined up to buy gold bullion and bullion coins. By January 1980 gold futures had reached U.S. $900 an ounce only to fall to $450 two months afterward. Late in the year gold hit $700 briefly followed by a swift decline during 1981.

Since that time, prices have fluctuated between $450 and $350 an ounce, relatively immune from the impact of political events. During the recession, substantially lower inflation reduced the incentive for investors to hold gold. Movements of the yen and European currencies against the American dollar could prompt a major rise in the price of gold. Figure 1 shows the monthly averages of gold prices at the afternoon closings in London.

2. Dealing in Gold

The price of gold is fixed in London, England in the offices of N.M. Rothschild and Sons Ltd. once in the morning and again in the afternoon. This price serves as a reference point for the world market. Mining companies usually sell their inventories on the basis of London fixings. Major spot markets are in London and Zurich; South Africa and the U.S.S.R., the two most important producers of gold, sell through Switzerland. Gold futures are traded on the New York Commodity Exchange, the International Monetary Market of the Chicago Mercantile Exchange and the

FIGURE 1



LONDON GOLD PRICES

U.S. DOLLARS per troy ounce

Winnipeg Commodity Exchange. Call options are traded in Vancouver, Montreal, Geneva and Amsterdam. The Canadian Imperial Bank of Commerce, the Bank of Nova Scotia and Noranda Mines Limited also act as agents in the London market.

B. Signs of the Times -- Gold and the Recession

Substantial increases in the price of gold in 1979 and 1980 have created a worldwide phenomenon -- a gold rush unlike any since the 1920s. Australia and the Western United States have also experienced a revival of former gold-producing areas.

In Brazil serious unemployment and skyrocketing inflation have triggered an old-fashioned gold rush. Even in China, where the price of gold is kept well below the world price, millions of peasants have set up small-scale operations.

Gold at its current high price is valuable enough to justify the exploitation of small deposits. Base metals, on the other hand, at historically low prices, require very large tonnages of ore to justify the development of a mine. The recession of the past three years has depressed spending for capital goods upon which market conditions of base metals depend. Consequently, even large multinational corporations have concentrated their exploration efforts on gold, entering into joint ventures with junior companies.

Companies which have come into being expressly to develop a gold deposit have rarely diversified into other commodities. Even spectacularly successful companies have tended to invest their profits in the acquisition of other companies. The major portion of these profits has tended to go straight to the shareholder.

C. The New Gold Rush

1. History of Gold Discoveries in Canada

Placer gold was first discovered in Canada on the Chaudière River in the Eastern Townships in 1832. Production began from placer deposits in British Columbia in 1858. Gold in quartz veins was discovered in Nova Scotia in 1862.

In 1896 two prospectors found gold on the banks of the Klondike. By 1900 over a million ounces of gold had been taken from streams in the area. About this same time, mining began in the Rossland copper-gold deposits in British Columbia.

Prospectors from Cobalt, Ontario reached northward to Larder Lake, Kirkland Lake and the Porcupine area east of Timmins. The Dome Mine which is still in production opened in 1910 in Porcupine. In 1941 23 gold mines in the Porcupine District produced 1.44 million ounces of gold. In 1932 output in the Kirkland Lake area peaked at 1.14 million ounces of gold from eight mines. Two major producers in this area, the Macassa mine and the Kerr-Addison mine, date from the 1930s.

The Horne mine opened at Noranda, Quebec in 1927. In 1929 the Siscoe mine was the first gold mine in the Rouyn-Noranda area. The Sigma mine opened in 1937 and the Lamaque mine in 1935 at Val d'Or.

Construction of the CNR in Red Lake led to the discovery of some of the richest gold ore in Canada. Campbell Red lake and Dickenson mines opened in 1949.

In Manitoba, the General Manitoba Mine opened in 1927. The San Antonio mine, which also contains gold in quartz veins, opened in 1932.

Gold mining from a lode-type deposit in quartz veins began in the early 1950s at Moresby Island in the Queen Charlotte Islands.

In 1939 the Rycon and Negus mines opened in the Yellowknife area in the Northwest Territories. Two major operations, the Con Mine and Giant Yellowknife Mines Ltd., produce gold from very rich ore.

Gold is also processed as the by-product of base-metal mining. Many of the copper mines in British Columbia are major producers of gold, but most gold elsewhere in Canada is found within quartz veins. Some of these porphyry deposits are amenable to mining by open-pit methods. Others, especially such older mines as the Dome Mine, utilize high-cost underground methods.

2. Production in Canada

The Depression of the 1930s was a bonanza to gold mining. Labour was cheap and after 1934 a fixed gold price stimulated new production. In 1936 a three-year tax-holiday was declared on all new metal mines. At the start of the war Canada encouraged the production of gold to pay for arms procurements. Production peaked in 1941, at a level which has not since been equalled, at 5.4 million troy ounces.

After the United States entered the war, the Lend-Lease agreements diminished the importance of gold reserves in the Canadian financial system. Gold production declined continuously until the early 1970s when gold ceased to perform a monetary function in most economies. In 1948 the Federal Government, enacted the <u>Emergency Gold Mining Assistance Act</u> to keep the mines operating. By 1972 only 21 mines were still in operation.

Gold production has been increasing steadily since the mid-1970s. Some marginal mines such as Pamour Porcupine near Timmins were forced to close during 1982. The value of gold mined in Canada increased 22.6% in 1983 over 1982 to $1.19 billion. Canadian mines produced 2.25 million ounces of of gold. Québec produced nearly 37% of this amount.

3. The Big Staking Rush

In 1983 British Columbia, Quebec and Ontario recorded an all-time high number of claims. Most of these claims are adjacent to known gold showings or producing mines.

In Ontario activity has been concentrated in the Hemlo area near Marathon on Lake Superior. Major discoveries near Hemlo which is close to Highway 17 have drawn nearly 200 junior companies to the area. The grade of the ore averages about .20 ounces of gold per short ton. Other areas of increased activity include properties adjacent to Amoco's Detour Lake Mine north of Cochrane, Terrace Bay on Lake Superior and the Sturgeon Lake area.

In Quebec large blocks of claims have been staked in the Pascalis area. The Rouyn-Noranda district recorded twice as many new claims in 1983 as in the previous year.

D. The Role of the Junior Mining Company

Over the two years 1979 and 1980 some 120 new companies now listed on the Vancouver Stock Exchange and holding claims on gold prospects in Canada were incorporated. The Vancouver Stock Exchange has played a special role in enabling junior mining and oil companies to raise capital. Many of these companies have shares denominated in pennies; few have working capital in excess of a few hundred thousand dollars.

Exploration in the traditional sense is a labour-intensive activity. While modern geophysical instruments are useful in outlining the dimensions of a mineral deposit, prospecting is still an art which combines luck, imagination and hard work. This is particularly true for gold.

Junior mining companies have been instrumental in finding many of Canada's most famous ore deposits. The whole Noranda to Chibougamau complex in Northwest Quebec might have gone undiscovered had not a few prospectors persevered in their search.

The most spectacularly successful companies in recent years have been Golden Sceptre Resources Ltd., Goliath Gold Mines Ltd., and International Corona Resources Ltd. instrumental in promoting the Hemlo area. Noranda Mines Ltd and Teck Corp. have entered into joint ventures to bring these properties into production.

E. New Mines and Exploration Activity

1. Ontario

In 1983 the number of claims recorded in Ontario more than doubled over 1982 to 70,314 -- 13,000 more than the previous staking boom in 1955. Exploration for gold focused on the Hemlo area near Marathon, Cameron Lake near Kenora, Sturgeon Lake, Detour Lake and the Swayze belt. There were 33,000 active claims in the Thunder Bay District alone, with 670,000 person-days (or three to six times the usual level) of assessment work completed during the year.

The Hemlo area is now regarded as the most important gold discovery in North America. By the late 1980s the three mines currently planned will produce a minimum of 600,000 ounces of gold annually or half of Ontario's present production. The Golden Giant-Noranda mill, starting up in early 1985, will have an initial capacity of 1,000 metric tonnes of ore per day increasing to 2,500 tonnes by 1987. Teck-Corona Resources is also sinking a shaft in the area. New estimates by Lac Minerals which holds claims adjacent to the Golden Giant property indicate that its reserves exceed 40 million tonnes, sufficient to supply a mill with a capacity of 4,000 to 6,000 tonnes per day. Lac Minerals has raised sufficient capital in the Eurocurrency market to finance its projected $250 million development.

These projects have had significant impact on the towns of the area. The town of Marathon is projecting a threefold increase in its population. Manitouwadge and White River also foresee significant additions to their housing stocks.

In September 1983 Amoco Petroleum Canada and Campbell Red Lake opened their Detour Lake mine 120 km northeast of Timmins. This $139 million development, expected to have a lifetime of 20 years, has reserves of 30 million tonnes with a grade of 0.125 ounce per tonne.

Several smaller operations are also coming into production. Lac d'Amiante du Québec (a subsidiary of Asarco Exploration) is about to open its 300 tons per day Aquarius mine near Timmins. Inco and Queenston Gold Mines Ltd will open the McBean mine near Kirkland Lake. This operation will process 500 tons per day.

A number of currently operating mines have recently undergone major expansions. The venerable Dome Mines, producing for over 70 years, has increased its mill throughput to 3,000 tons per day and replaced its grinding circuit. Lac Minerals' Macassa mine near Kirkland Lake now has the world's deepest single-lift shaft.

The Ontario Government has provided grants under its GOMILL program to Pamour Porcupine, Pancontinental Mining and Goldlund Mines to provide custom milling services to gold mines in their respective regions.

2. Québec

Prospectors staked 22,193 claims in 1983, an increase of 25% over 1982. Of the $108.6 million spent by the private sector on mineral exploration, nearly half this amount, $50.4 million, was spent exploring for gold. The Rouyn-Noranda district saw the majority of the increase in activity. Noranda Mines Ltd is spending $18.9 million on its Remnor project. Two new mines, Lac Minerals' Bousquet mine and Doyon mine (Soquem has a 50% interest), are now in full production. Soquem and New

Pascalis Mines are conducting a $6 million underground exploration and development programme near Val d'Or.

In the Chibougamau area, Corporation Falconbridge Copper is spending $845 million at Shortt Lake, 32 kilometres northeast of Desmaraisville.

3. British Columbia

In British Columbia, gold has not had as great an allure as in other provinces. Base metals, sometimes with accessory gold, have been the target of most exploration activity. Last year 106,683 claim units or 3% of the provinces' surface area was staked. The number of active companies exceeded 800, an increase of 100% over 1982. Junior companies accounted for most of the increase. Exploration for gold was centred in the Cariboo near Dome's Quesnel River porphyry-gold deposit.

4. Manitoba

Sherritt Gordon Mines is studying the feasibility of a 1,000 tonne per day operation on its Agassiz property near Lynn Lake. The company will conduct a joint development program on this property with another company, in exchange for financing of Sherritt Gordon's deep mine development at the Ruttan copper mine.

5. Northwest Territories

Cullaton Lake Gold Mines Ltd., Canada's third largest gold mining operation, is planning a major expansion this year of its operation at Cullaton Lake, District of Keewatin (380 miles north of Thompson, Manitoba). This mine commenced production in January 1983. Giant Yellowknife opened its Salmita gold mine in August 1983.

F. Revival of Old Mining Camps

The ease of conducting exploration is dependent upon access to a given area. When the price of gold began to rise substantially in the early 1970s prospectors naturally turned to areas in which former gold mines had operated. In the mid 1970s prospectors revived placer operations in the Cariboo and Dawson Creek.

The substantial price rises of 1979 and 1980 prompted junior companies and major corporations alike to return to old gold mining camps where large numbers of small mines had extracted millions of ounces of gold in the 1920s and 1930s. Ore dumps were reprocessed, old mines were dewatered and a veritable army of prospectors combed old gold showings in hopes of major finds. Underground development work on properties adjacent to producing mines extended reserves substantially in many cases.

Towns such as Kirkland Lake and Red Lake experienced a major revival. Other towns such as Timmins and Chibougamau with established long-lived mines serve as the suppliers for new construction and exploration.

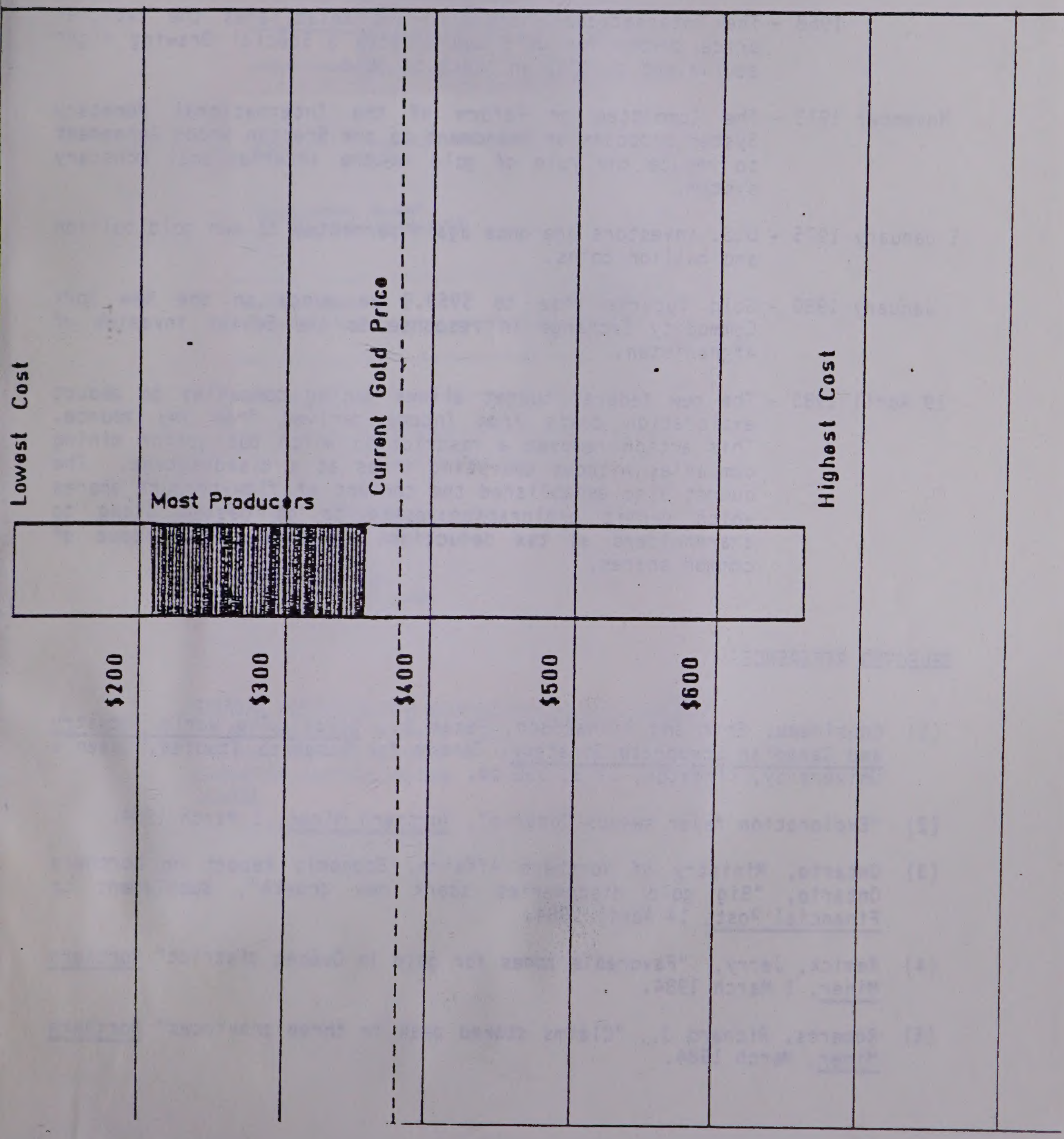
Gold mining currently employs about 4,000 people in Canada. Many small operations in the 100 to 500 tonnes per day range employ under 100.

G. Profit Margins of Operations

Profit margins of gold mines depend largely on the ore grade and the age of the mine (hence the state of the technology used) and transportation costs. Many low-grade mines have costs in the $350 U.S. an ounce range which is dangerously close to the current price of gold. Many new mines which have small tonnages and low grades are also in this marginal range. Production costs for Canadian mines range from $106 U.S. an ounce for a high-grade Ontario mine to $660 for a placer gold deposit in the Cariboo region of British Columbia. Figure 2 shows this range relative to the current price of gold. Many mines are storing high-grade ore as a buffer to protect themselves against a fall in the price of gold. Other companies report their ore reserves conservatively and base their operations and development work on gold prices substantially lower than the current price.

FIGURE 2

RODUCER COSTS AT CANADIAN GOLD MINES
1983 U.S. DOLLARS PER TROY OUNCE



CHRONOLOGY

1948 - The Federal Government enacts the Emergency Gold Mining Assistance Act to keep gold mines operating. This act remained in force until 1972.

1968 - The International Monetary Fund establishes the two-tier price system for gold and creates a Special Drawing Right equivalent to 1/35 an ounce of gold.

November 1973 - The Committee on Reform of the International Monetary System proposes an amendment to the Bretton Woods Agreement to reduce the role of gold in the international monetary system.

1 January 1975 - U.S. investors are once again permitted to own gold bullion and bullion coins.

January 1980 - Gold futures rise to $959.9 an ounce on the New York Commodity Exchange in response to the Soviet invasion of Afghanistan.

19 April 1983 - The new federal budget allows mining companies to deduct exploration costs from income derived from any source. This action removed a restriction which put junior mining companies without operating mines at a disadvantage. The budget also established the concept of flow-through shares which permit exploration costs to be passed along to shareholders as tax deductions attached to an issue of common shares.

SELECTED REFERENCES

(1) Cousineau, Eric and Richardson, Peter R., Gold: The World Industry and Canadian Corporate Strategy, Centre for Resource Studies, Queen's University, Kingston, 1979, 192 pp.

(2) "Exploration fever sweeps Ontario", Northern Miner, 1 March 1984.

(3) Ontario, Ministry of Northern Affairs, Economic Report on Northern Ontario, "Big gold discoveries spark new growth", supplement to Financial Post, 14 April 1984.

(4) Remick, Jerry, "Favorable zones for gold in Québec district" Northern Miner, 1 March 1984.

(5) Roberts, Richard J., "Claims staked peak in three provinces" Northern Miner, March 1984.

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